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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Jóse de la Torre-Bueno Art Unit : 2623  
Serial No.: 09/542,091 Examiner : Martin E. Miller  
Filed : April 3, 2000 Confirmation No. : 4964  
Title : REMOTE INTERPRETATION OF MEDICAL IMAGES

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REPLY BRIEF

Pursuant to 37 CFR 1.193(b)(1), Applicant responds to the new points raised in the Examiner's Answer as follows.

Claim 1 recites in relevant part:

"selecting a region of the decompressed medical image at the second location; and applying image analysis operations to a region of the source medical image at the first location corresponding to the selected region of the decompressed medical image." (emphasis added).

The term "image analysis" as used by Applicant does not refer to manipulation of an image to produce another image as in other types of image processing, but rather to analysis of information contained in the image to produce a "non-image" result, such as a fixed number (score). Some examples of image analysis operations described in the Specification include algorithms to perform densitometry on selected regions of the medical image in order to identify concentration of a particular

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analyte within the tissue sample, algorithms for finding objects within the image such as the nuclei of the cells, and algorithms for computing an integrated optical density for the nuclei of the cells and reporting the number of molecules per cell (Specification at page 2, lines 6-10). Consider page 4, lines 13-16 of the Specification, "Based on the selection, image server 24 applies image analysis functions directly to the source medical image stored on image server 24, thereby generating a more accurate score than if applied by remote view station 26 to the medical image after compression." (emphasis added).

The Examiner states on Page 3 of the Answer, "Then Novik performs image-processing functions on the data, which arguably could be called image analysis (column 9, lines 22-34)." (emphasis added). What Novik performs at the transmitting station where the source image is stored is not image analysis, and Novik provides no motivation or suggestion to perform image analysis there. Accordingly, the combination of Novik and Echerer et al. is improper, and consequently a prima facie showing of obviousness has not been made.

The thrust of the Novik patent is facilitating remote analysis, i.e., analysis of an image by a remotely located expert image viewer (see, e.g., column 2, lines 28-32 and 50-54, column 5, lines 29-31, and column 7, lines 41-43). Each step of the method after transmitting the initial compressed image relates to providing more information to the receiving station to improve the quality of the image so that the expert image viewer can better analyze selected portions of the image at the remote site (Blocks 208 and 211 of Figure 2 and related text at column 9, lines 45-56 and column 10, lines 38-47, respectively).

What Novik performs at the transmitting station is not image analysis, but rather manipulation of the image to produce

a new image, e.g., with more detailed data for a new field of view, or the generation of a new image by reorienting an image sensor (column 9, lines 20-33).

Novik does not teach or suggest performing actual image analysis operations at the transmitting site, and in fact, is directed to facilitating image analysis at the remote site. Echerer et al. merely discloses image analysis operations, with no mention of image transmission and remote viewing. Accordingly, one of ordinary skill in the art would find no motivation to combine these references.

For these reasons, and the reasons stated in the Appeal Brief, Applicant submits that the final rejection should be reversed.

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Respectfully submitted,



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